Press Release

Commencement of Collaborative Research on
Measurement of Exosomes in Blood from Cancer Patients

Tokyo, Japan (October 16, 2017) - The National Cancer Center Japan (hereafter, National Cancer Center), JVCKENWOOD Corporation (hereafter, JVCKENWOOD), Sysmex Corporation (hereafter, Sysmex) and Daiichi Sankyo Company Limited (hereafter, Daiichi Sankyo) announced today that they have commenced collaborative research with the aim of raising the quality of cancer diagnosis and treatment. The collaborative research will target exosome, a microparticle released from tissues.

It has been demonstrated in recent years that cancer patients have high levels of cancer-specific exosomes in their blood. The collaborative research aims to detect such cancer-specific exosomes (for instance, HER2 protein expressing exosome) from patient blood. The research is expected to provide a new option for patients to make decision for cancer therapy and evaluating drug treatment outcomes from blood, in addition to current tumor tissue sampling approach.

Regarding individual roles in the collaborative research, JVCKENWOOD will build technologies that detect cancer-specific exosomes by using its exosome measurement device. Sysmex will evaluate the device created by JVCKENWOOD and will apply its proprietary gene and protein measurement technologies toward clinical use. National Cancer Center and Daiichi Sankyo will make effective use of exosome measurement data in improving the diagnosis and treatment of cancer patients.

The research collaboration among a specialist cancer research organization, diagnostic and electronic device manufacturers and a pharmaceutical company makes it possible to establish this new technology for exosome measurement in clinical use. As a result, this exosome measurement is expected not only to greatly reduce the stress of patients by avoiding multiple tissue biopsies, but also to provide new therapeutic opportunities to patients in whom the sampling of lesion tissue is difficult.

(Reference information)

National Cancer Center

The National Cancer Center is a specialist cancer research organization actively engaged in developing body fluid diagnosis techniques that reduce discomfort for patients. Regarding exosomes, the research group led by Takahiro Ochiya, Head of the Center's Division of Molecular and Cellular Medicine, has achieved world-leading breakthroughs, such as the development of a system capable of high sensitivity detection of exosomes in patients' blood, and has abundant experience in body fluid diagnosis using exosomes and its clinical application.

JVCKENWOOD

JVCKENWOOD has created a high accuracy exosome measurement system applying optical disk technology called ExoCounter (Note 1) and is in the process of developing it for commercial use. The company aims to contribute to the collaborative research by providing technology for the high accuracy detection of exosomes specifically derived from cancer cells, through the further development of the system.

(Note 1) Joint development with Department of Biochemistry & Integrative Medical Biology, School of Medicine, Keio University

Sysmex

In the field of *in vitro* diagnostics which examine samples of blood, urine and cell, Sysmex is a major global player in such areas as hematology, immunochemistry, and hemostasis. Sysmex will contribute its proprietary gene and protein measurement technologies to the collaborative research. It will also provide development expertise, including that to achieve reliability, to enable JVCKENWOOD's exosome measurement system to be used in clinical practice.

Daiichi Sankyo

Daiichi Sankyo places major emphasis on anti-cancer agents in R&D activities. It is investigating ways of screening individual patients prior to their administration in order to reduce the risk of adverse events and achieve high efficacy, as well as methods of evaluating treatment outcomes from blood constituents. Daiichi Sankyo is targeting exosomes as a source of information for this purpose.

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